Geometry Final Review 1

1. What is your name?

Find the measure of each angle. *(Chapter 1 Section 6)*

2. Two vertical angles are complementary. Find the measure of each angle.

3. The measure of one angle of a linear pair is 3 times the measure of the other angle. Find the measures of the two angles.

4. The supplement of an angle is 130°. Find the complement of the angle.

Define and sketch the angle pair described.

5. Adjacent angles

6. Complementary Angles

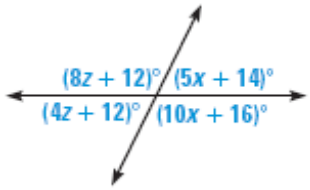
7. Perpendicular lines

8. Supplementary angles

Geometry Final Review 1

Solve for each variable. *(Chapter 2 Section 6 & Chapter 3 Section 3)*

9.



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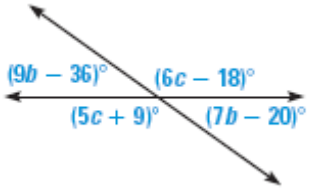

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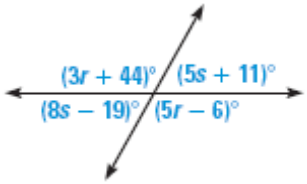

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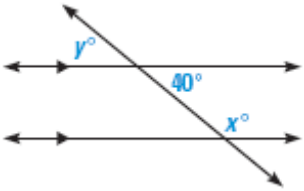

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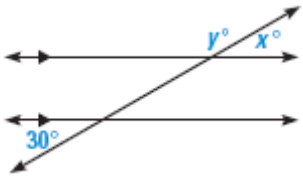

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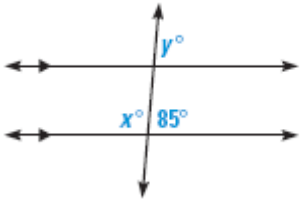

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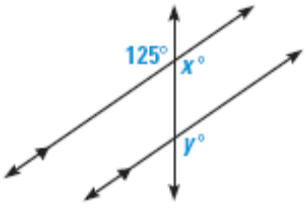

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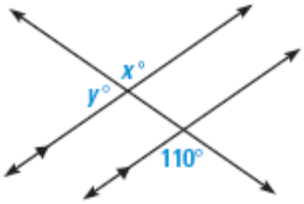

Geometry Final Review 1

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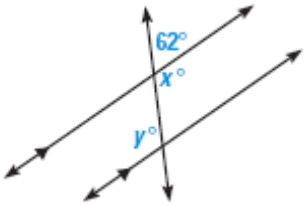
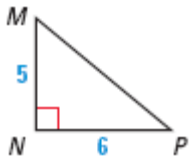


18. State the Pythagorean Theorem.

Find the unknown side length. Simplify answers that are radicals. Tell whether the side lengths form a Pythagorean triple. *(Chapter 9 Section 2)*

19.



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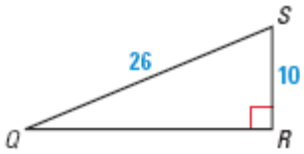

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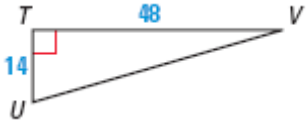
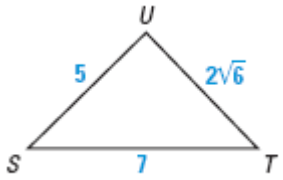


Geometry Final Review 1

22. State the converse of the Pythagorean theorem.

Tell whether the triangle is a right triangle. *(Chapter 9 Section 3)*

23.



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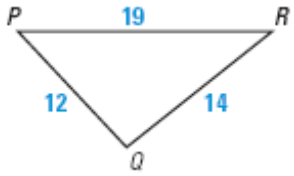

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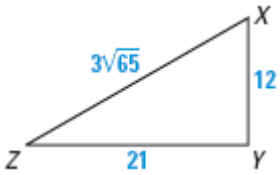


Decide whether the numbers can represent the side lengths of a triangle. If they can, classify the triangle as *right*, *acute*, or *obtuse*. *(Chapter 9 Section 3)*

26. 17, 18, 19

27. 15, 36, 39

28. 3, 5, 8

29. 7, 9, 12

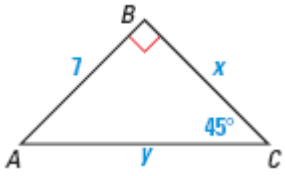
30. 100, 300, 500

31. $\sqrt{91}, 12, 20$

Geometry Final Review 1

Find the value of each variable. Write answers in simplest radical form. *(Chapter 9 Section 4)*

32.



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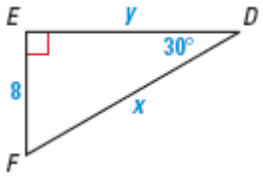

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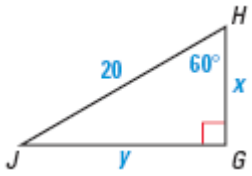


Define and sketch each type of triangle.

35. Scalene triangle

36. Right triangle

37. Equiangular triangle

38. What is the sum of the interior angles of any triangle?

Geometry Final Review 1

The variable expressions represent the angle measures of a triangle. Find the measure of each angle. Then classify the triangle by its angles. *(Chapter 4 Section 1)*

39. $m\angle E = x°$, $m\angle F = 3x°$, $m\angle G = 5x°$

40. $m\angle H = 60°$, $m\angle K = x°$, $m\angle L = x°$

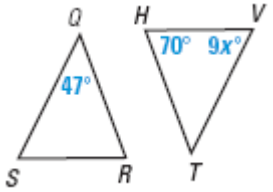
41. $m\angle P = x°$, $m\angle Q = (2x+10)°$, $m\angle R = (x+10)°$

42. $m\angle S = (2x)°$, $m\angle T = (2x-4)°$, $m\angle U = (2x-2)°$

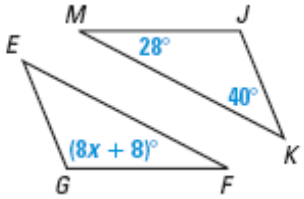
43. The measure of an exterior angle of a right triangle is 135°. Find the measures of the interior angles of the triangle.

Use the given information to find the value of *x*.

44. $\angle Q \cong \angle T, \angle R \cong \angle H$



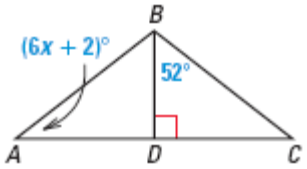
45. $\angle E \cong \angle K, \angle F \cong \angle M$



Geometry Final Review 1

Find the values of *x* and *y*.

46. $\measuredangle A \cong \measuredangle C, \measuredangle BDA \cong \measuredangle BDC$



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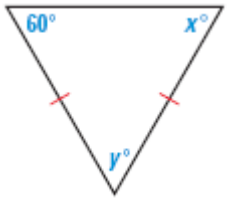

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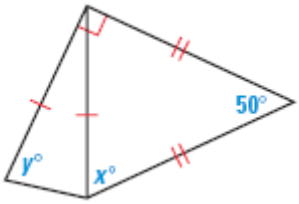

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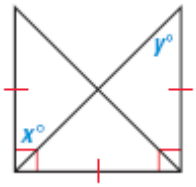


50. How do you find the measure of each exterior angle of a regular polygon?

51. What is the formula for the sum of the interior angles of a polygon?

52. What is the formula for the measure of each interior angle of a regular polygon?

Find the sum of the measures of the interior angles of the convex polygon. *(Chapter 11 Section 1)*

53. 36-gon

54. 45-gon

Geometry Final Review 1

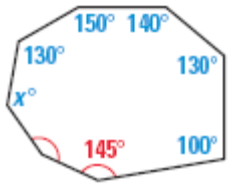
Find the sum of the measures of the interior angles of the convex polygon. *(Chapter 11 Section 1)*

55. 60-gon

56. 90-gon

Find the value of *x*. *(Chapter 11 Section 1)*

57.



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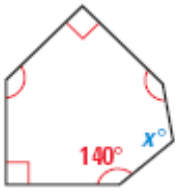

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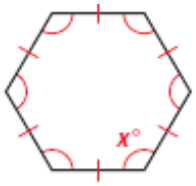


You are given the number of sides of a regular polygon. Find the measure of each exterior angle. *(Chapter 11 Section 1)*

60. 180

61. 24

62. 48

63. 36

Geometry Final Review 1

You are given the measure of each exterior angle of a regular *n*-gon. Find the value of *n*. *(Chapter 11 Section 1)*

64. 40°

65. 18°

66. 45°

67. 90°

Define the following segments, and sketch a triangle and draw in the segment and mark the triangle to show the segment you have drawn.

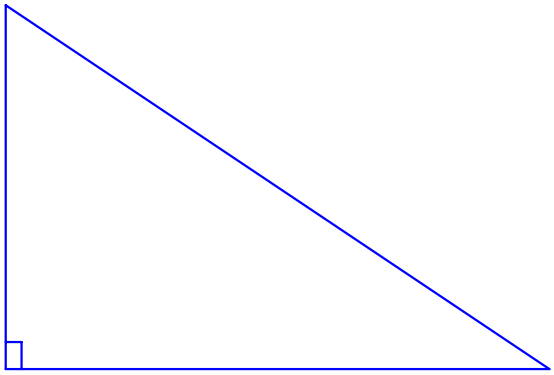
68. Altitude

69. Angle bisector

70. Perpendicular bisector

71. Median

72. What name is given to each side in the right triangle?



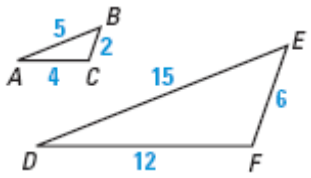
73. Define similar triangles.

Geometry Final Review 1

74. What are the ways to show two triangles are similar?

Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer. *(Chapter 8 Section 5)*

75.



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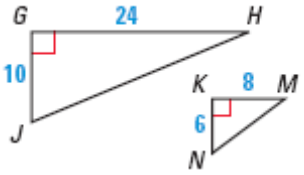

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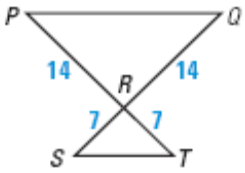
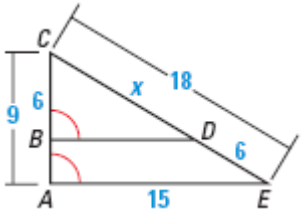


Geometry Final Review 1

Determine whether the triangles are similar. If they are, write a similarity statement and solve for the variable. *(Chapter 8 Section 5)*

78.



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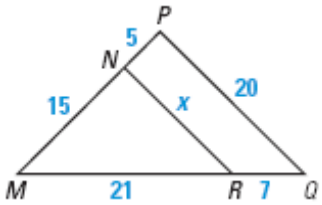

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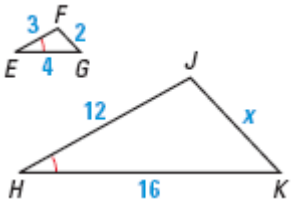
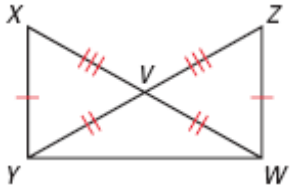


81. List all the ways that you can show that two triangles are congruent.

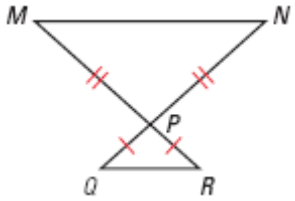
Geometry Final Review 1

Decide whether enough information is given to prove that the triangles are congruent. If there is enough information, state the congruence postulate you would use. *(Chapter 4 Section 3)*

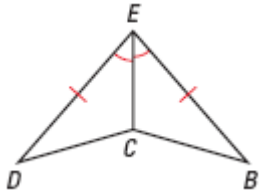
82. $\triangle XVY, \triangle ZVW$



83. $\triangle MPN, \triangle QPR$

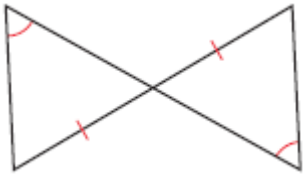


84. $\triangle BCE \cong \triangle DCE$



Is it possible to prove that the triangles are congruent? If so, state the congruence postulate or theorem you would use. *(Chapter 4 Section 4)*

85.



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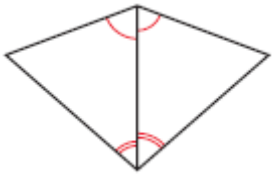

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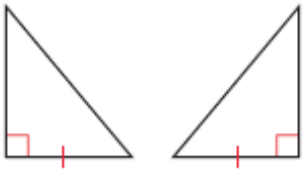
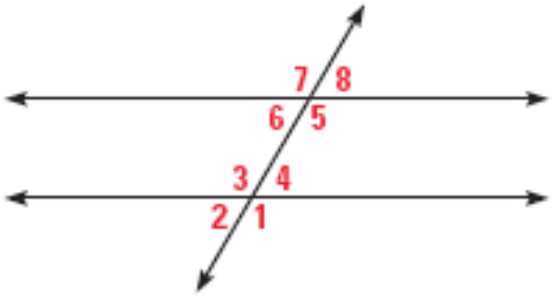


Geometry Final Review 1

Complete the statement with *corresponding*, *alternate interior*, *alternate exterior*, or *same-side interior*. *(Chapter 3 Section 1)*



88. ∡3 & ∡7 are _____ angles.

89. ∡4 & ∡6 are _____ angles.

90. ∡8 & ∡2 are _____ angles.

91. ∡4 & ∡5 are _____ angles.

92. ∡5 & ∡1 are _____ angles.